***Remarks***

Reconsideration of this Application is respectfully requested.

Claims 17-29 are pending in the application, with claims 17 and 29 being the independent claims. Claims 1-16 have been cancelled without prejudice to or disclaimer of the subject matter contained therein.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

Based on the above Amendment and the following Remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

The specification has been editorially amended to correct minor informalities.

The originally filed claims have been cancelled and rewritten as claims 17-29. The subject matter of the new claims correspond with the originally filed claims, except that the subject matter of claims 2 and 13 have been incorporated into independent claims 17 and 29.

Claims 1-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inoue et al ("Inoue") in view of Forster. If applied to the new claims, the rejection is respectfully traversed.

With respect to the independent claims, claims 17 recites: (1) "the holding means and the membrane being integral with one another" and (2) "a second substance provided on the first

substance for preventing propagation of a sound wave in a direction opposite to the desired direction of radiation of the membrane." Independent claim 29 recites the same features.

The primary reference, Inoue, fails to teach each of these features. Inoue teaches an ultrasonic transducer having a diaphragm ("membrane") 1 which is formed by a metal plate provided with a bulged portion 7 in its center and a piezoelectric disc 2 bonded to the inner surface of the bulged portion. A sound absorbing member ("first substance") 34 is provided between the piezoelectric element and the base plate 5b of the transducer. The membrane is elastically held between the top wall portion of a holding means 6 with elastic members.

Inoue does not teach that the diaphragm 1 and holding means 6 are integral with one another. These components are clearly shown in Figs. 1, 2, and 6 as being separate elements.

Inoue also fails to teach a second substance that prevents propagation of a sound wave. The Office Action, on page 4, cites element 5 in Fig. 6 as being analogous to the second substance. However, it is not disclosed that base plate 5b prevents propagation of sound. It is furthermore submitted that such a base plate is typically formed of metal, in contrast to the sound propagation preventing second substance, such as polyurethane, recited in claim 17. The base plate disclosed in Inoue is completely unsuitable for this feature.

The modifying reference, Forster, fails to bridge the deficiency in the teachings of Inoue.

Accordingly, it is respectfully submitted that claims 17 and 29 are patentable over Inoue and Forster. The remaining claims are dependent on claims 17 and are patentable for the reasons discussed above.

It is furthermore submitted that claims 20 and 21 are additionally patentable over the cited references. The Office Action rejected the originally filed corresponding claims 5 and 6 even though the references do not disclose the dimensions recited in claims 5 and 6. Instead, the Office Action took Official Notice that the dimension of the transducer affects the output of the transducer and argued that discovering exact dimensions would be routine experimentation. The Examiner is correct in stating that, wherein the general conditions are disclosed in the prior art, discovering the optimum ranges of a variable is not inventive. Initially, it is noted that the general conditions are not disclosed in the prior art, and that the statement of Official Notice is insufficient for defining the general conditions. Furthermore, in the present situation, a single variable, or even two variables, are not recited in the rejected claims. Instead, in claims 20 and 21, at least six different parameters are recited. It is respectfully submitted that determining these exact parameters would require more than "routine experimentation" and more than mere routine skill in the relevant art. Thus, it is respectfully submitted that claims 20 and 21 are additionally patentable over the prior art.

## *Conclusion*

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance with claims 17-29.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

Date: 1/18/02

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